

Contributions to the Fauna of Western Australia, No. 5.

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CRUSTACEA.

Family LIMNADIIDAE.

Eulimnadia cygnorum Dakin.

Eulimnadia cygnorum Dakin, Proc., Zool. Soc. Lond., 1914,
p. 299, pl. I., figs. 9-13.

Five specimens, Nos. 10750/54, four being adult females with ova, and one an immature individual, were collected at Cannington, the type locality, on the 29th September, 1923. They are of interest as by some of their characters they approach the older species *E. rivolensis* of Brady 1886.* They are larger than Dakin's type specimens with which they have been compared, agreeing with *E. rivolensis* in this respect. They also correspond with this species, as redescribed by Sayce†, in the shape of the shell, the lines of growth, the outline of the lateral plate of the tail, and the shape of the denticles which are less acute than in *E. cygnorum*. On the other hand they closely approximate to Dakin's species in the shape of the head, number of limbs, shape of the terminal claw as well as in the shape and size of the enlarged terminal denticle on the lateral plate.

The ova differ from Sayce's figure of the egg of *E. rivolensis* in being much less spinose. Dakin gives no description. The length of the four adult females is about 9 mm.

Family—LYNCEIDAE.

Lynceus tatei (Brady).

<i>Limnetis tatei</i>	Brady, Proc. Zool. Soc. Lond., 1886, p. 84, and fig.
<i>Lynceus tatei</i>	Sayce, Proc. Roy. Soc. Vic., XV., 1902, p. 258, figs. E1, E2, E3.
" "	Dakin, Proc., Zool. Soc. Lond., 1914, p. 303.

* Brady. Proc. Zool. Soc. London—1886—p. 84.

† Sayce. Proc. Roy. Soc. Vic.—XV.—1902—p. 245—pl. XXXII.

Specimens, No. 10749, were collected at Cannington as associated with the preceding species. They agree closely with Sayce's description and figures.

The species has been recorded from Rivoli Bay, South Australia (Brady); near Sydney, N.S.W. (Sars.); Rosstown and Elwood, Vic. (Sayce); and Busselton, W.A. (Dakin).

Family SPHAEROMIDAE.

Cilicæa tridens Baker.

Cilicæa tridens Baker, Trans. Roy. Soc. S. Austr., XXXIV., 1910—p. 81, pl. XXIII., figs. 1 to 12.

One specimen, No. 10408, an adult male, has been recognised among Sphaeromids, collected from a sponge at Cottesloe, in June, 1923.

A local specimen is in the collection of the Biological Department of the University; this was collected at the Cambridge Street Beach.

GENUS ISOCLADUS.

The genus *Isocladus* was established by Miers in 1876*, to receive *Sphaeroma armata* Milne-Edwards, and *S. spinigera* Dana, which differ from the true *Sphaeroma* in the presence of a long slender median process on the last thoracic segment in the male. It was diagnosed "Convex, somewhat wide posteriorly, seventh segment of the pereion in the male with a long, median, dorsal spine. Terminal segment of the pleon narrowing posteriorly, and acute at the extremity. Appendages of the pleon subequal, of a slightly sigmoid shape, and acute at the extremity."

In 1906, Miss Richardson † amended this description as follows:—"Last thoracic segment in the male with a slender median process, produced backward, abdomen composed of two segments. Terminal abdominal segment similar in both sexes, without notch. Branches of the uropoda in the male are large, broad plates. Maxillipeds with the second, third and fourth articles of the palp produced into lobes. Exopod of third pleopod two-jointed. Pleopods of the fourth and fifth pairs have the endopods thick, fleshy, with transverse folds, the exopods two-jointed." "The type is *Isocladus armatus* (Milne Edwards)."

? *Isocladus excavatus* (Baker).

Zuzara (Isocladus) excavata, Baker, Trans. Roy. Soc., S. Aust., XXXIV., 1910., p. 84, pl. XXIV., figs. 4 to 6.

* Ann. Mag. Nat. Hist.—(4)—XVII.—1876—p. 228.

† Proc. U.S. Nat. Mus.—XXXI.—1906—p. 13. Published 23/7/1906.

A number of specimens, No. 10755, collected in a rock pool at Cottesloe, in October, 1923, are, with hesitation, considered to belong to this species. They differ from Baker's figures and descriptions in the following features—Each segment of the peraeon bears a row of small granules subterminally. The process of the seventh segment is cylindrical, becoming abruptly narrower at the tip, to form a short blunt point. In 13 of the 17 specimens collected, this segment bears a small tubercle close to the posterior edge, on each side, nearly half-way between the base of the process and the epimeron. Four specimens have the process well developed, but the lateral tubercle either absent or rudimentary. Three specimens, which are considered to be immature, have the lateral tubercle developed, but the process very short. The last segment of the pleon has a well marked subterminal granular area. The flagellum of the first antenna has from ten to twelve joints, and that of the second antenna from thirteen to fifteen joints.

The largest specimen is 7.5 mm. in length, and nearly 5 m.m. in width. The colour is whitish, punctuate with black, the pleon is coarsely marbled in black and white; the rami of the uropods are like the peraeon, the "venation" is distinctly marked.

Baker's description was based upon a single specimen; it is therefore possible that a larger series from South Australia would include forms identical with those obtained at Cottesloe.

The granulation on the peraeon segments and the pair of tubercles on the last of the series are reminiscent of Stebbing's *Cyclura venosa*.*

In many respects the animal is very close to *I. magellanensis* Richardson† from Mayne Harbour, Owen Island, Straits of Magellan, South America. I would suggest the name *granulosa* for this Western Australian Isopod if further investigation should prove it to be distinct from the South Australian form.

Family LEUCOSIIDAE.

Leucosia pubescens Miers.

Leucosia pubescens Miers.—Trans. Linn. Soc. Lond. (2—Zool. I, 1877, p. 238, pl. 38, figs. 22 to 24.

A fine male specimen, No. 10239, of this species was found at South Beach, Fremantle, by Mr. L. C. Langoulant. It agrees with the description given by Miers and has the short close pubescence on the chelipeds well developed. The coloration is slightly different, there being four elongated white spots on the cardiac region which are neither mentioned by Miers nor shown in his figure.

* Journ. Linn. Soc. Lond. Zool.—XII.—1874—(1876)—p. 146—pl. VI. Later Stebbing altered the name to *Cycloidura venosa* as the previous name was pre-occupied. It was decided subsequently that *Cycloidura* is merely a synonym of Leach's genus *Zuzara*.

† Proc. U.S. Nat. Mus. XXXI.—1906—p. 14—fig. 18.

The length of the carapace is 25 mm., and its greatest breadth 22 mm.

The type locality is Shark Bay. This crab does not appear to have been recorded elsewhere, so that its discovery at Fremantle considerably extends its known area of distribution.

Family GALATHEIDAE.

Galathea australiensis Stimpson.

- Galathea australiensis* Stimpson, Proc. Acad. Nat. Sci. Philad., X., 1858, p. 251 (89).
 „ „ Miers, Rep. Zool. Col. 'Alert,' 1884, p. 277, Plate XXXIA (the figure is marked B on the plate).
 „ „ Stimpson. Smiths. Misc. Coll. XLIX., Art. III., p. 230, 1907.

The type specimen of this species was collected by Stimpson "among sponges dredged from a muddy bottom in six fathoms in Port Jackson, Australia." Haswell in his catalogue of Australian Crustacea (1882) records it from Port Jackson and Port Stephens, whilst Miers, in his account of the 'Alert' Crustacea, adds Port Denison, Port Molle, the Arafura Sea, Cumberland Island, Slade Point, Flinders Island and Shark Bay. The discovery of a single specimen, 10674, a female with ova upon a living purple sponge, in the course of being cast up by the sea, at Cottesloe, thus extends the range of the species some 450 miles down the West coast of Australia.

The colour of the animal in life was similar to that of the sponge upon which it was found, its bright red eyes forming a strong contrast to the uniform tint of the rest of the body. The colour of Stimpson's type (also a female) was "reddish with some bluish on the carapax, fingers of the hands tipped with dark purplish brown." The fingers do not gape, in this respect resembling Stimpson's type, and differ from the male described and figured by Miers.

The dimensions are:—Length of carapace 6·5 mm., width of carapace 4·5 mm.; length of rostrum 2 mm., length of chelipeds 9·5 mm.

Family HYMENOSOMATIDAE.

Elamena truncata (Stimpson).

- Trigonoplax truncata* Stimpson, Proc. Acad. Nat. Sci. Philad. X., 1858, p. 109—(55).
Elamene truncata A. Milne-Edwards, Nouv. Arch. Mus., Paris IX., 1873, p. 323.

- Elamena truncata* Alcock. Journ. Asiat. Soc. Bengal, LXIX.
1900, p. 386.
- “ ” “ ” Baker. Trans. Roy. Soc. S. Aust. XXX.,
1906, p. 112, pl. II., fig. 2, 2a, d.
- Trigonoplax truncata*.... Stimpson. Smiths. Misc. Coll. XLIX.,
Art III., 1907, p. 146.
- Elamena truncata* Kemp. Rec. Ind. Mus., XIII., 1917, p.
272, figs. 22, 23.

This little crab was first collected by Stimpson “at Ousima and among the reefs opposite Napa, Loo Choo.” It has since been obtained at “Samoa and Viti Islands,” (Mus. Godeffroy), India (Henderson); Nicobar Islands (Alcock); the Andamans (Kemp); Ceylon (Henderson); New Caledonia (A. Milne-Edwards); and South Australia (Baker). It is never common, very few specimens being recorded from any one locality. Its presence (a single specimen) at Cottesloe is therefore an interesting link in the chain of distribution.

Family SQUILLIDAE.

Squilla scorpio Latreille.

- Squilla scorpio* Latreille, Encycl. Méthod., X., 1825, p. 472.
- “ ” “ ” Miers. Ann. Mag., Nat. Hist., 5) V.,
1880, p. 18, pl. II., fig. 7.
- “ ” “ ” Kemp. Mem., Ind., Mus., IV., 1913, p.
42, pl. II., fig. 30.

A specimen of this Mantis Shrimp, No. 10549, caught at Forrest River, near Wyndham, was presented to the Museum by Professor Nicholls.

The species is an addition to the fauna of Western Australia, its previously recorded distribution being from Karachi to the Malay Peninsula, Celebes, Borneo, and Northern Australia (Port Essington).

ARACHNIDA.

Family BUTHIDAE.

Isometroides angusticaudus Keyserling.

- Isometroides angusticaudus* Keyserling, in: Arachn., Austr., II.,
1884–1889—p. 19.
- “ ” “ ” Kraepelin, in: Das Tier: Lief. 8:
Scorpiones und Pedipalpi—1899,
p. 40.
- “ ” “ ” Kraepelin in Res. Mjoberg's Swedish
Sci. Exp., Austr., 1910–1913.
Arkiv. för Zoologi. K. Sv. Vet-
enskapsak: 10, No. 2, 1916, p.
21, fig. 1.

The genus *Isometroides*, according to Kraepelin, 1916, is one of the greatest rareties in collection. It contains two species, *I. vescus*, Keys, and *I. angusticaudus*, Keys. The dry incomplete type of the former is in the Berlin Museum, the type of the latter was originally in the Museum Godeffroy, but cannot now be traced.

The published records would indicate that *I. vescus* is represented in collections by the single type and that the sole representative of the other species is a specimen collected in the Kimberley District, W.A., by Dr. E. Mjoberg, on the 17th September, 1911. On the other hand, it is quite possible that the species are present in the collections of Australian Museums although this has, up to the present, not been made public.

Mr. S. Oliver, of Warriedar Station, near Yalgoo, has recently presented to the Museum a little Scorpion, found at Lake Monger, which agrees very closely with Kraepelin's detailed description of *Isometroides angusticaudus* (1916, p. 21), although the proportions of the vesicle and aculeus are 3 : 3 not 4 : 2.

Also the five rows of dark markings on the tergites are increased to seven, of which the central series is scarcely visible to the naked eye, being reduced to a minute black dot on the posterior portion of the dorsal keel of each segment. The colour of the first three caudal segments is like that of the trunk, not yellow, and that of the 4th and 5th caudal segments and of the vesicle more intense, the fifth segment being very dark brown, almost black.